

**2016-17 Freeze-Up and Break-Up Studies of the
Alaskan Beaufort and Chukchi Seas**

**Progress Report No. 1
September 21 - October 24, 2016**

Activities Undertaken

From September 21 through October 24, 2016, the following activities were conducted under the contractual Scope of Work:

- ***Task 1. Planning and Administration:*** The project kick-off meeting was conducted on October 6, 2016, and a written summary of the meeting was submitted to BSEE later the same day. A brief preview of the current project was presented at BSEE's Anchorage office on October 11 following a more extensive presentation on the methods and findings of the 2015-16 Freeze-Up Study. Initial planning for the February and June/July reconnaissance flights (Tasks 3 and 4, respectively) was undertaken with the aviation subcontractor.
- ***Task 2. Satellite Imagery:*** Thirty RADARSAT-2 images, consisting of 15 of the Alaskan Beaufort Sea and 15 of the Alaskan Chukchi Sea, were selected and ordered from MacDonald, Dettwiler, and Associates (MDA). Images of each basin are to be acquired twice per month from mid-October through the end of February to document the occurrence of freeze-up, and mid-May through mid-July to document the occurrence of break-up. The order has been confirmed, payment has been completed in full, and first image of each basin has been acquired and downloaded from MDA.

The acquisition of publicly available MODIS and AVHRR images commenced on October 1. An update to the National Weather Service web portal has reduced the availability of AVHRR images covering the region offshore of Alaska, but useful images still can be procured from the University of Alaska, Fairbanks, GINA website. The National Weather Service has been informed of the problem, and has indicated that remedial actions are underway.

- ***Task 5. Data Analysis:*** Publicly-available meteorological data and ice charts dating back to September 2016 have been downloaded from the National Ocean Service, Weather Underground, National Ice Center, and Canadian Ice Service.

Activities Planned

- Continue the acquisition and commence the analysis of publicly-available meteorological data, ice charts, and MODIS and AVHRR images.
- Proceed with the acquisition of the additional 28 scheduled RADARSAT-2 images.
- Commence the analysis of the RADARSAT-2 images with primary emphasis on identifying the location of the landfast ice edge, and correlating changes in the ice canopy with the corresponding meteorological conditions.
- Continue planning and logistical arrangements for the freeze-up reconnaissance flights to be conducted in late February 2017.

Percent Completion

Contract Amount = \$623,939.00

Invoice No.	Period Covered	Work Completed Each Period		Work Completed to Date	
		% of Total	\$	% of Total	\$
4096	9/21-10/24/16	25.24	\$157,482.50	25.24	\$157,482.50